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# AREI UPDATES: Seeds

## Updates on Agricultural Resources and Environmental Indicators

Natural Resources and Environment Division  
Economic Research Service, U.S. Department of Agriculture

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### 1994 Seed Use, Costs, and Trade

- Seed costs per acre were higher in 1994 because of higher seed prices paid by farmers and slightly higher seeding rates per acre for corn and wheat.
- Seed use in the 1994/95 crop year for eight major field crops is expected to be similar to 1993/94.
- U.S. seed trade balance in 1994 fell 4 percent to \$394 million compared with 1993.

Farm operators surveyed in the 1994 Cropping Practices Survey provided information on seeding rates and costs for corn, soybeans, cotton, wheat, and fall potatoes. The survey covered major States accounting for 71-94 percent of the acreage in these crops.

Seed cost per acre varied among the surveyed States due to differences in seeding rates and seed prices as affected by geographic location and availability of moisture during the growing season. Areas with plentiful moisture tend to support heavier seeding rates.

Average seeding rates and seed cost per acre for major field crops, in 1994 were as follows: Corn--average seeding rate was 25,824 kernels per acre, up 1 percent from 1993. The average seed cost per acre was \$23.54, up 4 percent from 1993, reflecting higher corn seed prices and corn seeding rates. Soybeans--average seeding rate in 1994 was 69

pounds per acre, same as in 1993. The average seed cost per acre was \$17.25, up 6 percent, due to 10-percent increase in soybean seed price. Spring wheat--average seed cost per acre was \$10.11, up 18 percent from last year, as spring wheat seed price increased 23 percent. Higher seeding rate per acre also contributed to increased seeding cost. Cotton--the average seeding rate, at 16 pounds per acre, remained unchanged in 1994. Average seed cost per acre, on the other hand, was \$9.49, slightly higher than 1993, due to slight increase in cottonseed price in 1994. Fall potatoes--the average seeding rate was 21 cwt. per acre, 1 cwt. per acre lower than in 1993. Seed cost per acre was \$210, up 4 percent from 1993, due to a 19-percent jump in the seed potato price. Winter wheat--average seeding cost, at \$7.68 per acre, was 7 percent lower than in 1993, due to lower seeding rate per acre.

Total seed consumption in the 1993/94 crop year for eight major crops (corn, sorghum, soybeans, barley, oats, wheat, rice, and cotton) was 6.3 million tons and is expected to be the same in the 1994/95 crop year.

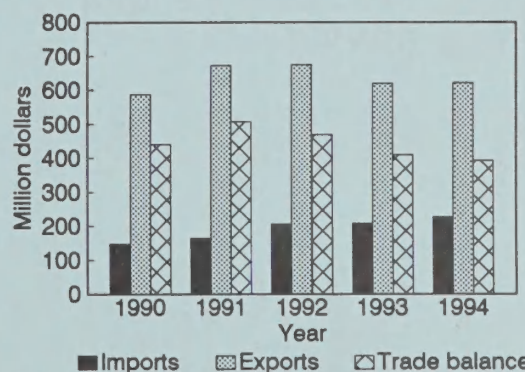
The value of total seed imports in 1994 rose 9 percent, whereas the value of seed exports increased less than 1 percent compared with 1993. As a result, U.S. net seed trade balance in 1994 fell 4 percent to \$394 million.

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#### About AREI UPDATES

AREI UPDATES is a periodic series which supplements and updates information in *Agricultural Resources and Environmental Indicators (AREI)*, USDA, ERS, AH-705, Dec. 1994. UPDATES report recent data from surveys of farm operators and others knowledgeable about changing agricultural resource use and conditions, with only minimal interpretation or analysis. Please contact the individual listed at the end of the text for additional information about the data in this UPDATE. If you would like to be added to the mailing list or have other questions about AREI UPDATES or AREI, contact Richard Magleby, (202) 219-0436.

#### U.S. trade in seeds for planting



Source: U.S. Department of Agriculture, Foreign Agricultural Service.



Table 1--Corn for grain seeding rates, plant population, and seed cost per acre, 1994 1/

State	Acres planted 2/	Rate per acre	Plant population per acre	Cost per acre
	1,000	Kernels	Number	Dollars
Illinois	11,600	26,151	23,300	23.33
Indiana	6,100	25,706	22,800	22.38
Iowa	13,000	26,553	24,000	24.65
Michigan	2,550	25,197	22,200	27.39
Minnesota	7,000	28,065	26,100	25.92
Missouri	2,400	23,282	19,600	21.70
Nebraska	8,600	24,745	21,900	22.80
Ohio	3,700	26,841	22,800	23.94
South Dakota	3,800	20,993	19,100	19.32
Wisconsin	3,750	26,709	24,000	21.98
1994 average	62,500	25,824	22,580	23.54
1993 average	57,350	25,564	22,390	22.72
1992 average	62,850	25,304	22,030	21.35

1/ States listed planted 79 percent of U.S. corn acres in 1994. 2/ Preliminary.

Table 2--Soybean seeding rates, seed cost per acre, percent of seed purchased, and treated with pesticide, 1994 1/

State	Acres planted 2/	Rate per acre	Cost per acre 3/	Acres with purchased seed	Seed treated with pesticide
	1,000	Pounds	Dollars	Percent	Percent
Northern:					
Illinois	9,600	69	17.84	73	20
Indiana	4,700	74	17.73	75	22
Iowa	8,800	65	17.30	82	15
Minnesota	5,700	70	16.57	71	9
Missouri	4,600	69	15.65	55	20
Nebraska	2,900	75	20.21	76	23
Ohio	4,000	82	18.00	68	35
Arkansas	3,450	56	13.68	63	41
1994 average	43,750	69	17.25	72	21
1993 average	42,500	69	16.29	73	na
1992 average	48,630	65	15.40	73	na

1/ States listed planted 71 percent of U.S. soybean acres in 1994. 2/ Preliminary. 3/ Based on data from farmers who used purchased seed. na = not available.

Source: 1994 Cropping Practices Survey, Economic Research Service and National Agricultural Statistics Service, USDA.

Table 3--Cotton seeding rates, seed cost per acre, percent of seed purchased, and treated with pesticide, 1994 1/

State	Acres planted 2/	Rate per acre	Cost per acre 3/	Acres with purchased seed	Seed treated with pesticide
	1,000	Pound	Dollars	Percent	Percent
Arizona	313	13	8.32	95	63
Arkansas	980	12	7.93	95	89
California	1,100	17	15.50	89	98
Louisiana	900	11	8.21	99	98
Mississippi	1,280	11	9.03	95	95
Texas	5,450	18	8.47	43	73
1994 average	10,023	16	9.49	66	62
1993 average	10,360	16	9.39	69	na
1992 average	10,200	16	8.74	74	na

1/ States listed planted 74 percent of U.S. upland cotton acres in 1994. 2/ Preliminary. 3/ Based on data from farmers who used purchased seed. na = not available.

Table 4--Fall potato seeding rates, seed cost per acre, percent of seed purchased, and treated with pesticide, 1994 1/

State	Acres planted 2/	Rate per acre	Cost per acre 3/	Acres with purchased seed	Seed treated with pesticide
	1,000	Cwt	\$	Percent	Percent
Colorado	74	25	263	25	55
Idaho	410	21	173	79	91
Maine	78	22	210	72	54
Michigan	44	19	226	86	71
Minnesota	74	17	177	90	73
New York 4/	23	22	254	78	84
North Dakota	133	17	173	91	91
Oregon	54	22	274	91	94
Pennsylvania	19	20	252	94	73
Washington	152	24	284	98	99
Wisconsin	73	20	233	87	33
1994 average	1,134	21	210	81	81
1993 average	1,469	22	202	88	na
1992 average	1,058	20	141	86	na

1/ States listed planted 93 percent of the fall potato acreage in 1994. 2/ Preliminary. 3/ Based on data from those farmers who used purchased seed. 4/ Excludes Long Island. na = not available.

Source: 1994 Cropping Practices Survey, Economic Research Service and National Agricultural Statistics Service, USDA.

Table 5--Spring and durum wheat seeding rates, seed cost per acre, percent of seed purchased, and treated with pesticide, 1994 1/

States	Acres planted 2/	Rate per acre	Cost per acre 3/	Acres with purchased seed	Seed treated with pesticide
	1,000	Pounds	Dollars	Percent	Percent
Spring:					
Minnesota	2,600	109	12.42	56	71
Montana	3,450	66	5.33	25	88
North Dakota	9,100	101	10.45	38	56
South Dakota	2,100	98	9.48	34	38
1994 average	17,250	95	10.11	38	62
1993 average	16,950	93	8.54	40	na
1992 average	17,350	91	8.39	41	na
Durum:					
North Dakota	2,450	103	12.60	37	50
1994 average	2,450	103	12.60	37	50
1993 average	1,950	100	7.69	40	na
1992 average	2,200	96	7.56	36	na

1/ States listed planted 94 percent of U.S. spring wheat and 86 percent of U.S. durum wheat acres in 1994. 2/ Preliminary. 3/ Based on data from farmers who used purchased seed. na = not available.

Table 6--U.S. exports of corn seed by country of destination and volume

Country	1990	1991	1992	1993	1994	Change 93-94
	-----Metric tons-----					%
Canada	4,076	7,561	8,192	8,678	15,421	78
Mexico	10,329	7,963	12,472	15,750	16,453	4
France	9,666	10,953	13,859	8,177	6,188	-24
Germany	1,796	8,822	1,670	2,750	2,338	-15
Spain	4,132	2,076	2,853	2,492	4,004	61
Italy	20,889	21,773	23,955	14,178	11,782	-17
Netherlands	2,437	10,354	2,791	4,834	7,977	65
Greece	1,828	4,072	3,263	3,768	5,092	35
Romania	1,050	2,532	191	132	7	95
USSR	2,459	3,569	353	0	0	0
Turkey	59	171	388	1,798	338	-81
Japan	1,431	1,491	1,960	1,071	1,730	62
Subtotal	60,152	81,337	71,947	63,628	71,330	12
Total all countries	70,366	93,722	78,509	88,729	105,296	19

Source: U.S. Department of Agriculture, Foreign Agricultural Service.

Table 7--Winter wheat seeding rates, seed cost per acre, percent of seed purchased, and treated with pesticide, 1994 1/

States	Acres harvested	Rate per acre	Cost per acre 2/	Acres with purchased seed	Seed treated with pesticide
	1,000	lbs.	Dollars	Percent	Percent
Colorado	2,550	47	3.57	40	11
Idaho	790	88	11.12	69	75
Illinois	900	113	17.98	56	57
Kansas	11,400	63	5.85	32	25
Missouri	1,100	120	13.50	56	27
Montana	1,850	59	6.17	29	86
Nebraska	2,100	65	6.30	31	11
Ohio	1,180	134	17.23	58	82
Oklahoma	5,300	76	6.16	27	21
Oregon	870	75	8.58	70	97
South Dakota	1,350	72	5.66	41	6
Texas	2,900	75	6.61	36	38
Washington	2,300	63	7.26	80	89
1994 average	34,590	71	7.68	39	36
1993 average	37,210	72	8.25	40	na

1/ Preliminary. States listed harvested 84 percent of U.S. winter wheat acres in 1994. 2/ Based on data from farmers who used purchased seed. na = not available.

Source: 1994 Cropping Practices Survey, Economic Research Service and National Agricultural Statistics Service, USDA.

Table 8--Seed use for major U.S. field crops 1/

Crop	1989/90	1990/91	1991/92	1992/93	1993/94 Preliminary	1994/95 Projected	1993/94-1994/95 % change
	-----1,000 tons-----						
Corn	529	540	566	528	563	546	-3
Sorghum	36	39	48	39	36	36	0
Soybeans	1,664	1,701	1,705	1,726	1,914	1,858	-3
Barley	324	350	310	317	290	288	-1
Oats	374	306	290	285	243	272	12
Wheat	3,009	2,709	2,811	2,778	2,889	2,940	2
Rice	180	180	195	190	210	200	-5
Cotton 2/	94	110	120	115	117	118	1
Total	6,210	5,935	6,040	5,978	6,262	6,258	0.1

1/ Crop marketing year. 2/ Upland cotton.

Source: U.S. Department of Agriculture, Economic Research Service.



Table 9--U.S. imports of corn seed by volume

Country	1990	1991	1992	1993	1994	Change 93-94
-----Metric tons-----						%
Canada	8,010	6,857	6,674	8,328	14,121	69
Argentina	511	138	4,821	3,787	3,630	-4
Chile	4,509	3,406	14,129	8,149	17,094	109
Hungary	881	0	391	171	597	249
Subtotal	13,911	10,401	26,015	20,435	35,442	73
Total all countries	13,996	10,978	26,809	22,969	37,557	64

Source: U.S. Department of Agriculture, Foreign Agricultural Service.

Table 10--U.S. exports of soybean seed by volume

Country	1990	1991	1992	1993	1994	Change 93-94
-----Metric tons-----						%
Canada	449	425	1,178	4,485	2,327	-48
Mexico	36,731	4,827	32,674	19,472	8,891	-54
France	4,827	4,272	603	2,778	3,312	19
Italy	55,937	65,571	34,500	27,764	15,711	-43
Turkey	2,836	1,838	7	14	4	-7
Japan	2,325	6,947	7,341	7,439	9,654	30
Subtotal	103,104	83,880	76,303	61,952	39,899	-36
Total all countries	106,991	91,004	83,585	68,891	47,964	-30

Source: U.S. Department of Agriculture, Foreign Agricultural Service.

Table 11--U.S. exports and imports of seed for planting

Item	1990	1991	1992	1993	1994	Change 93-94
-----\$ million-----						%
Exports:						
Forage	104	101	114	116	89	-23
Vegetable	176	220	221	218	240	10
Flower	13	14	19	19	22	16
Corn 1/	138	181	171	168	181	8
Grain sorghum	27	28	34	34	20	-41
Soybean	45	41	36	28	23	-18
Tree/shrub	2	2	3	2	2	0
Sugarbeet	2	3	3	3	4	33
Other	81	82	68	31	41	32
Total	588	672	669	619	621	0.3
Imports:						
Forage	35	30	45	45	39	-13
Vegetable	60	79	82	83	85	2
Flower	23	24	27	31	35	13
Corn 2/	18	15	35	29	44	51
Tree/shrub	2	2	2	2	1	50
Other	9	14	15	17	23	35
Total	147	164	206	208	227	9
Trade balance	441	508	469	411	394	-4

1/ Not sweet, not food aid. 2/ Certified.

Source: U.S. Department of Agriculture, Foreign Agricultural Service.

## AREI UPDATES

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